

formatting or display standards that allow the data or information to be manipulated and displayed in a consistent manner.

Specifically, the World Wide Web ("WWW") uses a server component or computer to send information, typically called "Web Pages" to another component called a client. These pages can be static meaning that they are stored on the server component and never change or can be dynamic and can change based on some criteria. The client, usually another computer, displays those pages sent by the server. The client computer uses a software component called a browser. One function of the browser is to accept the pages of information, interpret the content in a prescribed manner and display the information. Another function of the browser is to initiate activity using data that can be entered into the browser and/or with buttons or other features contained on the page to cause the server computer to perform some desired action. One example of this is that the server component can accept data entered onto a displayed page by the browser on the client component and record this data into a database located on the server component when a button on the displayed page is pressed.

The format of Web Pages can be defined using HyperText Markup Language ("HTML"). These are standards that define how a Web Page is to be displayed. This HTML can also contain any number of "scripting languages" which, when combined with software that also exists on the client computer, can be used to extend the functionality of the client and server relationship. A script might write to a file contained on the client computer as contrasted with the simple displaying of information on the client computer's screen. This file could be used, for example, to identify the client the next time the client connects to the server without requiring the client to reenter a multiplicity of information. This file is often called a "cookie." Such features and functions are well known to those skilled in the art.

One use of the World Wide Web is to provide resources to clients who lack certain facilities. For example, a client can search a database containing billions of pieces of information that could not be contained on the client computer due to excessive cost, storage requirements, or other missing resources. Another, but more relevant example is given by the client who needs their name printed on a golf ball but who neither possesses the software, the golf ball, or the complex and expensive printing apparatus. Thus, the World Wide Web provides immediate access to often expensive or complex resources.

Personalization is also featured in another context wherein it is common practice to permit a user to personalize or customize their 'home page' on various web sites. This simply means that the user can select from a variety of prescribed elements of content (viz., combining selected stock market items, a newspaper, and area specific weather reports, or even television listings), such that the user, upon visiting that web site is presented with a home page whose layout and content they assigned. There also exist web sites that will display and print or mail newsletters whose content is similarly selected. This invention does not relate in any manner to the selection of commonly available data or content (viz., a newspaper clipping service). This invention specifically calls for the unique and individualized data supplied by the user to be made part of the final printed product.

Existing printing companies have embraced the Internet for personalized printing. However, they have simply translated their current order taking methods and applied them to the Internet. This invention extends that process significantly since it adds the ability to order uniquely individualized product.

BRIEF SUMMARY OF THE INVENTION

An embodiment of the present invention provides a method and system for printing unique and individualized items from the data entered on and sent by a client system to a printing device on a server system or a client system wherein the database resides on the server system. The client system is provided with an identifier that identifies a customer. The server system creates and opens a database for the identified customer. The client system displays a form for the data entry of the personalization and individualization information. The client system also displays one or more forms that may include a selection of other variable data maintained on the server system. The variable data includes various levels of personalization and individualization. Personalization provides for some basic characteristic to be printed in common on all items. This might be, for example, ink color, type style, or global content such as text or illustrations. The next level of personalization modifies certain features contained in the first level. This might include that parts of the global content have a different color, type style or text modifications. These also print in common on all items. This invention adds to existing personalization technologies the individualization level. The first level of individualization provides for content

that is uniquely printed on each item. The next level of individualization provides for the automatic substitution of individualization content based on conditions that may exist in any of the other levels. All of these functions take place over a communications link such as the Internet.

At the request of the client system used by a customer, the server extracts individualization data from a database and merges that data with other variable databases maintained on the server and presents the combined data to the client system for display. The customer, by interacting with the server maintained database, can preview each displayed item. The customer can elect to print samples of the final product locally using a printing device attached to the client system. When the customer is ready, they will elect to print on a paper stock maintained on the printing device at the server system or on the client system if the customer has the required stock and a suitable printer.

This embodiment, when treated as a whole, may comprise an order, may be part of an order system, or may be used in a multiplicity of sub-orders forming part of a complete order. The order may or may not be part of commerce or e-commerce.

The benefits of the individualized printing system of this invention are substantial. First, the customer can order an exact quantity as opposed to fixed quantities often dictated by the fixed plate cost required by printing presses. In the case of wedding or social invitations for example, customers are forced to order a minimum quantity of 25 items so that the cost of the plate is amortized immediately. In addition, if the customer needed only 27 invitations, it is common practice to require ordering in blocks of 25. Thus, the customer is forced to order 50. The customer has all the powerful features of the server-based printing system including, but not limited to stock selection and font inventory. Waste is minimized or eliminated. Time consuming plate making and hazardous materials are not used. Finally, the customer benefits from the added value that the individualized database can be applied to a multiplicity of additional paper products. Wedding invitations are, for example, printed with each guest name as part of the wording (individualization), but the server-controlled printer can also print the fully addressed envelopes, individualized respond cards, and individualized place cards. This invention provides for subsequent printing requirements and features that may change based on conditions that may change as a result of prior print activity. As in the example of wedding invitations, after respond